LETTERS

Canister Round Is Long Overdue; HEP and HESH Would Also Help

Dear Sir:

I enjoyed the update on the effort to procure a suitable APERS round for the 120mm cannon ("Proposed 120mm Tank Round Would Regain Antipersonnel Capability," *ARMOR,* Nov-Dec 2000). The requirement for a 120mm APERS round has been ignored for too long. I do not agree, however, with LTC Pride's insinuation that a pre-120mm armed tank was not "envisioned as a tank killer on the open, rolling terrain of Europe." This leads you to believe that the M60-series (and also the original M1) tanks carried a full array of 105mm rounds on board, and that these tanks were not primarily tank killers. Even though each M60A3 in my platoon (3-12 Cav, 3AD) carried a full 56 rounds, all we carried were Sabot and HEAT. The mission was the same, no matter what platform: destroy enemy armor. Table VIII has not changed significantly since then, either.

USFK, and the rest of the Armor force, has always had a need for an anti-personnel munition. Army transformation and the changing operational environment have little to do with the requirement for APERS, as the requirement has existed as long as the tank (or the cast-iron cannon) was confronted with infantry.

On a larger subject, the lack of special munitions makes the M1A1 inferior to the 105mm M1 (or M60) in the infantry support role. Urban warfare is a constant threat that we are not well-prepared for. The 120mm HEAT round, while having excellent anti-armor characteristics, has limited anti-personnel and anti-materiel capability due to the shaped-charge warhead. A simple 120mm HE round, like the M393 105mm HEP (high explosive plastic) or HESH (high explosive squash head), would be much more useful and probably cheaper to produce than the MPAT and other "smart" rounds.

While we're at it, how about designing a 120mm incendiary round as well?

One last suggestion for a new APERS round — best to put a fuze on it to allow long-range engagements. It will be a more flexible munition in the field, and it will be safer to fire over friendly positions. Otherwise, it is only good as a "last-ditch" defense.

CHRIS GINTHER
Washington, D.C.

M1 Ammo Planner Says Users Wanted Only Two Types of Round

Dear Sir:

Kudos on the great article by LTC Dave Pride on the proposed 120mm canister round (*ARMOR*, Nov-Dec 2000). I wish the proponents every success. Nothing is ever certain in this business, but approval of that ORD ought to be a no-brainer. (Funding is of course another matter.)

I was the Project Manager, Tank Main Armament Systems (PM TMAS) who developed the U.S. 120mm ammo family. I think it's worth stressing two points:

- We could easily have developed a 120mm canister round and fielded it with the M1A1. Compared to... KE and HEAT, canister would have been a piece of cake, and if piggybacked on those programs would have been quite inexpensive.

- 120mm canister didn't just slip through a crack. Not developing and fielding such a round was a deliberately taken, strongly held user decision.

The Armor user of that time was wedded to a two-round family, then and forever; there would never, ever be a need for any third round. This was driven partly by the severe reduction (*56 vs 40 rounds. – Ed*) in basic load in going from 105mm to 120mm, but also by a very closed mindset about the future of armored warfare.

At that time, the user wouldn't have accepted canister if it came for free, hand-delivered by the Jennifer Lopez of the timeframe.

At the risk of belaboring the obvious, I hope those responsible for Transformation contemplate this lesson and others like it. Decisions based on a point-solution view of the battlefield foreclose options, and we can ill afford an inflexible mounted force, optimized on restrictive terrain sets and on one or two parameters only.

Keep up the great work!

COL (RET.) DAVID A. APPLING
2d PM TMAS

Range Suitability Should Be Responsibility of Unit's Personnel

Dear Sir:

In the article "Fighting the IDT Tank Table VIII: A National Guard Unit's Solution" (Nov-Dec 2000), MAJ Pryor implies the Master Gunner Branch at Fort Knox is in the business of certifying how units conduct TT VIII on MPRC's. Specifically, he wrote that they had submitted findings of an analysis of the MPRC at Fort Polk "to the Master Gunner Branch at Fort Knox," and that after reviewing this information, a "TT VIII certification nod for the Fort Polk MPRC" was issued. These statements are not totally factual, and imply something that the Master Gunner Branch does not do. These statements also imply that the unit was not qualified to make its own decision on how doctrine should be applied to its training, and debases the abilities of the unit master gunner and commander.

The facts of this matter are that, after its survey of the Fort Polk MPRC, 1st Battalion, 156th AR, of the Louisiana ARNG did submit issues for doctrinal clarification to Fort Knox, specifically the inability of the MPRC at Fort Polk to execute certain engagements on TT VIII. One task was the A4 (long-range moving target), which could not be executed to the range-to-target standard. The issues were reviewed, and guidance provided, by Platoon Gunnery Branch of the Directorate of Training Doctrine Development (DTDD) here at Fort Knox, not the Master Gunner Branch. DTDD's Platoon Gunnery Branch reviewed the issues and responded with a common sense approach. Platoon Gunnery Branch's findings stated that if an MPRC cannot support a specific task, then the unit should execute the task as closely as possible to the established standard. In this case, the A4 engagement was fired several hundred meters short of range-to-target standard.

Many units faced a similar dilemma when the current Tank Gunnery Tables were published in *FM 17-12-1-2,* in May '98. But one has to realize that the current TT VIII and Tank Gunnery Tables were not developed with a specific range or MPRC in mind. The tables were designed to develop and test the proficiency of specific combat skills and tank gunnery techniques, not a unit's ability to execute the tasks on a particular range.

The purpose of the Master Gunner Branch is to train master gunners for the Armor Force, and the business of Platoon Gunnery Branch is to write doctrine for the Armor Force. However, both the Master Gunner Branch and Platoon Gunnery Branch are constantly queried for clarification or interpretation of existing doctrine. In most cases, these clarifications and answers are tempered by the common sense of a master gunner here at Fort Knox who is asked to do the job of the unit asking the question. Neither the Master Gunner Branch nor Platoon Gunnery Branch is in the business of giving a "TT VIII certification nod" to any MPRC. It would be impossible for any unit or agency on Fort Knox to "certify" each MPRC for all the various ways that the Tank Gunnery Tables could be conducted on particular ranges. This action would also take away the flexibility of the unit as to how it executes training.

Units that have an MPRC or range that is unable to meet current doctrinal standards should address this issue to the Army Training Support Center (ATSC) at Fort Eustis. ATSC cannot provide an overnight fix, but can work to develop a solution. Several factors will determine whether this solution is a range upgrade or new range. Units are not expected to train without training resources, and ranges are required to conduct tank gunnery. Remember, problems that are not addressed remain problems.

MAJ Pryor's article details well how his unit tackled the difficult task of conducting Tank Gunnery Qualification with the additional ob-

stacles encountered by National Guard units. Certification or validation of any MPRC's ability to execute TT VIII, or any other Tank Gunnery Table, to standard should be the decision of the unit's commander. The unit master gunner should determine the pertinent issues, and advise the commander accordingly. To relegate this certification or validation to anyone else will undermine the competency of that unit master gunner and commander.

The Master Gunner Branch has and will continue to train each student to the high standards of the Master Gunner Program. Every graduate is capable of providing highly technical training to his unit, and making recommendations to the commander on how to conduct training. Additionally, Platoon Gunnery Branch will continue to write doctrine that enables American tank crews to remain the most lethal in the world. The decision on how doctrine applies and how training is executed should be the decision of the unit commander, with advice from his master gunner, not an agency external to the unit.

SFC IRA L. PARTRIDGE
Operations NCO
Master Gunner Branch
Fort Knox, Ky.

Bradley's Are Too Big to Solve Light Cavalry's Need for Optics

Dear Sir:

I thought SFC Belonus' article was innovative and addressed the major shortfall in the light cavalry scout platoon – its ability to acquire the enemy with limited optics. However, I feel the Bradley CFV is the wrong direction to go as an interim improvement. This adds a 30-ton vehicle that has a large signature and limited deployability on the battlefield for the advantage of ATGM capability and thermal optics. Instead, I recommend taking SFC Belonus' scout platoon concept and replacing the CFV with the German-built Wiesel 2 Light Armored Personnel Carrier.

The Wiesel can mount a 20mm cannon, and can be fitted with an extendable optics mast. Its height (1.8 - 2.1 meters) is not much greater than that of a HMMWV, and it is air-deployable with a CH-47. It has a crew of two and can carry up to five dismounts. As for an ATGM capability, use the Javelin, or the Wiesel 2 can mount a HOT ATGM with the 20mm cannon. This would give the scout platoon added firepower and better optics, yet retain its stealth and deployability.

I have seen LRAS3 mounted on the HMMWV. When are we going to get it right? You have to be completely exposed to use it, and it adds a great deal to the vehicle's silhouette, plus you are now without a primary weapon system.

Both the German Wiesel and the Fennek reconnaissance vehicle have the capability to use extendible optics masts, allowing the vehicles to scan for targets from a hide position with a very small signature. Maybe we should take some lessons from the Germans as we go into our Future Scout Vehicle development.

And for those readers who say "Buy American," remember where the business end of the M1A1 and A2 came from.

CPT ERIC WISHART
HHT Commander
1/221st Cavalry (NVARNG)

Predictive Intelligence: It May Be Difficult, But It's Not Impossible

Dear Sir:

I am greatly concerned by one of the conclusions reached by MAJ Deal and CPT Carter in their article: "Surrendering the Initiative: A Command Decision" in *ARMOR,* Jan-Feb 2001. They said "...that predicting enemy actions and intentions is highly speculative and cannot even begin to be accomplished until thorough reconnaissance is conducted."

To be sure, everyone would like a world where "thorough reconnaissance" can be conducted of everything before every battle. That is not our world. Predictive intelligence is hard, no question. Perhaps the authors have witnessed their share of failures in prediction. However, just because a thing is difficult does not in and of itself warrant its removal as a desired function. Using that logic, the number of failures in battle planning that occur at our training centers would call for the removal of maneuver tactics from our kit bag.

I've been teaching Army soldiers how to do predictive intel for many years now, including three at Ft. Irwin, and I could not agree more with the level of difficulty that the authors assign the task. I also agree that our current doctrine does not do enough to codify the TTP for successful predictive intelligence. However, I am alarmed that the proposed remedy to this situation would be to rescind prediction of the enemy's COA as a primary objective of the intel BOS. This, together with our present fascination with building a picture of the current enemy situation, chips away at what must remain a fundamental skill of the intel soldier: the look into the future.

Waiting until every rock in the AO has been looked under will do as much to surrender the initiative to the enemy as any dangers the authors imagine in prediction. But a fixation on the present leads to a targeting mentality that classifies what of the enemy can be seen into things to be shot, and does nothing to anticipate (the opposite of react to) the enemy and prevent his interfering with our goals.

Predictive intelligence is hard, but eminently achievable. What we need is a thorough look at our teaching methods and our doctrine, both of which are under way at the MI school. As much as I admire Forrest Davis, quoted by the authors, my answer to the question asked in his own 1997 article, "Predictive Intelligence: Do We Really Need It?", is yes. Without it, we either wait interminably for near-perfect recon or plan, prepare and execute without any idea what the future holds.

LTC JON CLEAVES
Senior Military Analyst
Threat Support Directorate

Desert Uniform "Floppy Hat" A Better Choice Than Berets

Dear Sir:

I am interested in the beret debate, even though I retire in June of 2001. I agree with Leonard Wright's comment about berets giving no protection from the sun or other elements. Skin cancer IS on the rise from ozone depletion, as statistics bear out. I offer another alternative to the pith helmet, however. The floppy hat like the one we wear with desert fatigues, but in BDU camo pattern. Here's a hat that you can throw in your duffel bag and it comes out looking fine. It provides 360 degree sun/element protection and also keeps the sun out of your EYES (no small consideration when aiming a weapon or doing any other critical task requiring vision). Another advantage: The elite forces get their well-deserved exclusive symbol back. I know we want to promote one Army, but this is not the way to do that. Are we going to give everyone the Congressional Medal of Honor too?

SFC TOM SMITH
A Co 2-358 AR
Ft. Lewis, Wash.

Threat Expert Says We Goofed In Identifying Russian Tank

Dear Sir:

Your November-December 2000 article "Did the Rebels Misidentify Knocked-Out Tanks?" states the case for reassessing vulnerability of the more modern Russian tanks. Please note, however, that the tank in the accompanying photograph has also been misidentified. Explosive reactive armor (ERA) has been applied to a wide variety of former Soviet tanks, and makes identification more problematic. However, the tank in the photo has Kontakt ERA, and is most likely a T-72BV. The T-72BM is a signficantly upgraded tank with Kontakt-5 ERA, for protection comparable to T-90.

TOM REDMAN, GS-13
TRADOC Threat Support Directorate
Ft. Leavenworth, Kan.

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The Readers Respond

"An Infantryman's Thoughts on Armor"

Dear Sir:

Interesting article by MAJ Bateman ("An Infantryman's Thoughts on Armor"). I find it interesting that with such a strong opinion he of all people seems to miss the mark on the addition of the medium weight vehicle to the force. Notice that I did not say transition from M1A1. MAJ Bateman's points on logistics and force projection are quite valid. We are heavy and require a lot to sustain. This is nothing that the heads of the armor community haven't said repeatedly in this very publication. There is a plan for addressing these things and it is called the Future Combat System, not an interim weight vehicle.

I would rather focus on the role that MAJ Bateman thinks Armor has on the battlefield. First and foremost, I think that most soldiers place a high priority on survival. I certainly do. The idea that survival is some sort of an afterthought just doesn't register here. Let's win the fight and come back home. Just a thought. There is something that you get that accompanies that rather substantial amount of steel that you have wrapped around you in a tank. That is the knowledge that although you are not invincible, it does take a lot to destroy you. This translates to confidence and aggressive actions on the battlefield that are critical to success. I wasn't in the Army when Desert Storm began, but I think the number of casualties would have been a little bit higher without the M1A1 in the fight. Protection does matter. There is a reason that we have different branches/MOSs in the Army. To attempt to place the role of Armor into the same category and apply the same criteria to Armor as Infantry would be a big mistake. I applaud you for stepping into battle with your "BDU Armor" but you are not asked to accomplish the same mission with your BDUs and Javelin as I am. The protection that means jack **** to you means something totally different to me. It means that if needed, to help you in a time of need, I can raise risk and lessen caution as I close with and destroy the enemy that threatens you because I know the capabilities of the armor around me will allow me to act a lot more aggressively than I would if I were in a Bradley or an LAV.

For the record I'll summarize this whole heavy/medium/light thing. The Army identified a need to get more firepower on the ground quicker than we can with the M1 tank. The interim weight vehicle bridges a gap that was clearly there and addresses rapid deployment issues and should help in places where maneuvering a tank would be impractical. The next generation of tank will continue to do most of what the M1 does. It will have the lethality of an M1A1, more protection than a LAV, and be lighter and more deployable. Ideally, it will allow us to maintain the boldness and audacity that is inherent in Armor and Cavalry right now. No need to feel sorry for tankers. We're pretty happy with where we are and where we're going. We'll be there when you call.

ROBERT P. ASHE
CPT, AR
USMA AR Branch Rep

Armoring the Infantry Recalls Success of WWII

Dear Sir:

I wish to comment on the diatribe against heavy armor by Major Bateman, "An Infantryman's Thoughts on Armor," that appeared on pages 11-12, *ARMOR*, Jan-Feb 2001.

The only part of the article that I agree with is his conclusion's opening sentence, "To make a weak historical point…" I concur that it is weak. It is also out of context and flat wrong. MAJ Bateman's argument that the Germans were winning when they had lighter tanks (Mark II, III, and IV) and losing when they had heavy Panthers and Tigers is obnoxious, and he should know better. He ignores the doctrinal and operational concepts under which the opposing forces fought. He also ignores the fact that Allied tanks improved and were vastly superior to earlier models.

But let me hit the real issue concerning "Transformation," which has nothing to do with gun tube elevation, vehicle maintenance, fuel consumption, or anything else concerning the Abrams MBT. The real issue is that light infantry is too light.

Look back to Reorganization Objective Army Divisions (ROAD) that served us since the mid-60s. It was a direct carryover from WWII experience (disregarding the failed Pentomic Division, the Army's "Transformation" of the early '60s). The general purpose Infantry Division (Light) had organic tank and mechanized battalions, the exact number of each to be tailored based on METT-T. The division could be readily beefed up into an Infantry Division (Mechanized) by simply increasing the proportion of mechanized infantry battalions.

Two decades ago, the Army ignored all those lessons of WWII, scrapped this balanced organization, and created the Light Infantry Division (LID). This was a 10,000-man unit that regularly demonstrated an inability to even feed itself in deployments and exercises, much like its WWII predecessor. But it could deploy rapidly, so we made more of them.

Further confounding the effort to lighten the force, the Army repeatedly refused to procure a light tank to replace the Vietnam-era M551 Sheridan. I'd like to remind younger readers that the M8 Armored Gun System (AGS) that was type classified but then canceled in 1995 is essentially the same vehicle that was tested in the mid '80s but was never procured then, either. The AGS was the linchpin of the 9th Infantry Division's experimental and revolutionary 1980's High Technology Light Division (HTLD), sometimes derisively called the "Dune Buggy Division." Without AGS, the concept could not succeed, so the 9th ID was reorganized conventionally and subsequently deactivated before the deployment to Desert Shield and Storm.

So, in 1999, the new Chief of Staff of the Army recognizes that the light forces are too light, and determines to use new technology to develop a lightweight equivalent of the heavy force. His objective is a 20-ton tank with the survivability and lethality of today's 70-ton Abrams. Great idea! But now, it seems as though every "light fighter" who slept through the logistics planning portions of C&GSC wants to twist this into saying that we need to eliminate the heavy force TODAY and replace the MBT with a an APC with a cannon. That is utter nonsense.

The other point that has been totally obfuscated in "Transformation" debates is that the IBCT is essentially a mechanized infantry brigade equipped with a newer family of light armored vehicles. There are variants for infantry, engineers, mortars, antitank, air defense, command, maintenance, medical, etc., etc., just like the M113 family of APCs; like the family of halftracks of WWII, even!! In other words, discounting the mindlessly distracting debate of wheel versus track, the Army enters the 21st century having finally stumbled into the secret we mastered so well in WWII: "Mechanized (or Armored) Infantry." All that is missing is a suitable AGS, but this time, we might actually get one in the form of

the 105mm cannon-armed Mobile Gun System (MGS).

So I wish "Light Fighters" all the best in their quest to mechanize themselves so that they can bring more than backbreaking manpacked loads to the fight, and move faster than plodding at a foot marching pace. And with keen focused insight, hopefully they will design the vehicles of those mechanized battalions so that they can elevate against high targets and deliver precise, lethal fire in support of the accompanying dismounted and mounted infantry. And with that accomplished, I am fully confident that they will be able to deploy rapidly and bring a sufficiently lethal capability to meet most contingencies. And if need be, they will have sufficient combat power to defend and buy time for the heavy legacy force to deploy and enter the theater, where it can utterly destroy the threat that was impertinent enough to challenge the Armed Forces of the United States of America.

But so long as there remain thousands of modern MBTs, IFVs, APCs, and armored SP artillery in the hands of potential opponents world wide, I suggest that the rush to eliminate the Abrams, the best MBT on the planet, and castrate the U.S. Army's Armor is plainly misguided.

CHESTER A. KOJRO
LTC, AR, USAR (Ret.)

Survivability Looms as a Question In Army's Shift to Light Armor

Dear Sir:

I read MAJ Bateman's article in the Jan-Feb 2001 issue of *ARMOR*, and while I agreed with several of his points, I also disagreed with a couple... As I am a tanker, I guess that won't surprise you. As I understand it, the senior Army leadership intends to field some light "armored" brigades now and eventually mothball the M1 series of tanks (I'm still not clear if they intend to totally do away with all the heavy armor). First of all, the LAV III is more deployable, cheaper, and probably less maintenance-intensive; we'll soon find out. However, without the extra applique armor package, it can only stop a 14.5mm round. Now, I agree that we should be able to deploy quickly, and rapid deployment infantry units should be able to utilize armor, light or heavy, as soon as they're on the ground. LAV IIIs are clearly much more rapidly deployable than the M1 series. But I do think we need to use caution here. It seems we're so concerned with getting there fast that we're not thinking about what we'll face when we get there. Will China, Iraq, or North Korea sweat when they see LAV IIIs; probably not. It'll still be a speed bump, just a little bigger. The concern I have is that the threat will outgun us in the fight. A T-90, or T-62 for that matter, can chew through LAV IIIs, at most armed with a 105mm, just as easily as it can chew up crunchies.

I think it is good that the LAV IIIs will be able to go with infantry in a hurry. I do not think we should look to the LAVs to do any decisive fighting unless we know for sure that they will face no enemy medium to heavy armor. The problem is, sooner or later they will face enemy armor, and then what? We keep looking at the M1 and saying, well, it's not deployable. Have we taken a closer look at our means of moving it. Yes, aircraft wise, the Galaxy can take only one, but what about the naval mode?... What new ships are under development, specifically in the cargo transportation area? I think we need to consider this because, in my opinion, we will still need heavy armor for some time. Eventually, who knows what will transpire with the electrical rounds or lasers they're developing, but for now we need heavy armor and will for some time.

This leads me to another point, survivability. He says mission accomplishment is ranked ahead of survivability. He also says our armor protection doesn't mean anything to him. Come on, that's a good one! How many times does that armor provide cover for dismounts? Many. Also, I haven't read of too many dead soldiers accomplishing the mission. If tankers had to leave their tanks to join infantryman in a fight, we wouldn't need tanks, just more infantry.

There will always be situations or places where only infantry can go. That is what infantryman get paid for. I will tell you that tankers are entitled to more armor protection; that is the point. Our mission statement is to close with and destroy the enemy using firepower, maneuver, and shock effect. I love infantrymen, but they really don't shock that much. You get shock effect when you hear a 120mm go off and see that SABOT or HEAT utterly destroy something. I would venture that you get more shock effect when an enemy sees its main battle tank fire at and hit an M1 and watch in horror as their main tank killing munition sticks out of the front slope, the M1 turret turns and sends a 120mm greeting card into and through the other side of the enemy MBT. That is exactly when the enemy's will starts to falter, and when that happens, victory is not far behind.

That same will can only be strengthened at the sight of countless burning U.S. LAV IIIs and scattering U.S. infantry. In Somalia, the relief column was made up of HMMWVs and was decisively defeated. Senior Army leadership publicly regretted the fact that there was no U.S. heavy armor available to send to the Rangers. There have been incredible advances in anti-armor capability, specifically armor penetration and ease of use for the aggressor. That is a big problem for the LAV.

Finally, his historical example of Germany losing with the Tiger and King Tiger was very poor. The reason the Germans lost is not because their heavy tanks were not better. They were, although the 85mm T-34 was very good. They lost because they were being totally out-manufactured. The Russians and Americans were producing more that 10 tanks for every one the Germans were producing. The Germans also had too many models and so maintenance parts weren't universal at all. If the Germans had as many tanks as the Russians, we'd probably be speaking German now.

I can see why MAJ Bateman generates so much mail. The BLUF is, we're all on the same side and, though few will admit it, tankers need infantrymen as much as infantrymen need tankers. I guess we just disagree a little on what systems we use in our mutually supporting relationships. Again, maybe one day heavy armor will be a thing of the past, but for the next 10 years, I think we'll need it.

CPT MATT EICHBURG
HHC/2-8 CAV
1st Cavalry Division

Can Armor Guys Take Note, And Not Offense?

Dear Sir:

I am a tank battalion commander and I enjoyed MAJ Bateman's article in the Jan-Feb 2001 *ARMOR.* He has a great gift for prose and I do agree with his assessment. As an Armor officer for over 15 years, I have seen the day of the M1 come and go. My biggest issue with the M1 is the main gun storage capacity. As has been proven in many wars, but especially wars between Israel and Arab countries, the number of main gun rounds carried on tanks made huge differences in the outcome of small unit combat. I also agree with his assessment of mobility from a operational point of view. The M1 is horrible. As for fuel, I wish my checking account looked like my fuel account! I applaud him for his far-thinking article, I can only hope my fellow armor officers will take note versus taking offense.

KEITH D. LOCHNER
MAJ(P), AR, CAARNG
Cdr, 1st Battalion, 185th Armor

To "Complete the Mission," You're Gonna Need Tanks

Dear Sir:

On MAJ Bateman's article, I disagree with most all of it. The one smart thing in his article is that he knows that he will need armor....

Those light (armored vehicles) will not survive, and then who are you going to call? There is no such thing as too much firepower, accuracy, or protection, and I don't care how much fuel or support it takes; get it there, an infantryman's life depends on it. MAJ Bateman has fallen prey to the political correctness of not bullying these Third World countries into line. They are not worth one American life. He sounds like he wants to die for our country. I want to complete the mission and go home. (Remember GEN Patton, history teacher?) It takes survival to make that happen. It takes survival to complete the mission. Go ahead and get some sort of light gun system to keep your head above water 'til we get there... Bottom line is, it will still

take real tanks to complete the mission, no matter where or when it occurs.

TOD L. VANN
MAJ, AR, ALARNG
AO/S3 152d Armor

"An Infantryman's Thoughts..." Brings Praise and a Clarification

Dear Sir:

I just read MAJ Bateman's article in the Jan-Feb 2001 issue of *ARMOR*..... As an infantryman (light, airborne, heavy) of 18½ years experience, it was a refreshing viewpoint. Keep up the good work.

One minor point, and I do mean minor: my observation on why the Germans went with the Panther was because the T-34 was cleaning the clocks of the PzKpw IIIs and IVs. But I agree with MAJ Bateman; the Tiger wasn't the answer, they should have built a better medium tank to deal with the T-34 series. Anyway, great article!

LTC NEIL C. REINWALD, JR.
Commander and Professor
of Military Science
University of Alabama

LAV III's Armor Barely Exceeds Protection of Early WWI Tanks

Dear Sir:

"An Infantryman's Thoughts on Armor" is an interesting article. I want to address MAJ Bateman's points on armor, firepower, and maneuver. His basic point seems to revolve around strategic mobility and discarding enough armor to achieve it. My point is that without sufficient armor, a tank will fall out quickly after the battle starts or not be available at all. It will be a burning wreck. Armor allows the vehicle to move under fire on the battlefield and protects the crew.

The armor protection being discussed (on the LAV III) is about the same as on the British 1917 Mk IV tank. Artillery, the number one casualty producer, is far deadlier today and the firepower density higher than ever. The Sherman could survive 105mm artillery near misses and a hit any place but the engine deck. The thin armor now being looked at cannot survive a near miss by anything heavier than an 82mm mortar. A hit anywhere will destroy the vehicle. Every nation uses 105mm or heavier artillery. Look at the loss rate in infantry platoons. Operating in the same environment, light armor units will suffer very high vehicle and crew loss rates. Can the U.S. Army afford to replace vehicles and crewmen at the same rate as infantry? Can the U.S. Army deploy light armor units with as many vehicles as there are infantry to allow for the losses?

In discussing firepower, his basic point seems to revolve around terminal effects against buildings. My point is it must be specified what targets a tank is to destroy. If killing a tank with a frontal shot is required, you will need a gun (very heavy, huge recoil forces, low-cost, high-speed, small projectile, large variety of munitions, high rate of fire, large heavy vehicle), missile (light weight, no recoil, extremely high-cost, low-speed, large heavy projectile, single purpose warhead, single purpose launcher, low rate of fire, small light vehicle) or rocket (still in development, light weight, no recoil, medium-cost high-speed large medium-weight projectile, large variety of warheads, high rate of fire, small light vehicle). The gun is the best current answer to the firepower demand....

MAJ Bateman's basic point about maneuver seems to revolve around strategic mobility, minimal logistic needs, and bridge-crossing capability. My point is that strategic mobility is a matter of transport capability. Buy enough heavy lift aircraft and or preloaded high-speed ships with brigade sets and there is no problem. The only way to speed up current strategic transport, ease maintenance needs, supply consumption and bridge requirements is to lighten the tank. This limits the tank's armor (is it available?) and firepower (can it destroy the required enemy?). There is no light tank or armored car mounting sufficient firepower in the weight class of a loaded Hummer.

His historical points are very weak. The tanks being used by the Germans had nothing to do with why they won early in the war or ended up losing.... Between the wars, the Germans figured out what a tank had to do on the battlefield and how it had to operate internally. The British hobbled their tank development with railroad size limits and taxes on high horsepower engines. The U.S. Army Infantry Branch did no useful R&D up to 1936 because it had what it considered adequate tanks for a future war. If it had not been for General MacArthur authorizing the Cavalry Branch to develop combat cars in 1932, the U.S. Army would not have had a modern medium tank chassis at the start of the war. The U.S. Army did not get internal tank operation correct until the M1.

Until after WWII, a U.S. Army tank unit's purpose was to support infantry (a recurring point in the Bateman article). A German tank unit's missions were (and still are): attacking enemy armor, destroying heavy infantry weapons deep in the main fighting field, and destroying artillery, leader means, and supply.

The light armor of the Sherman resulted in over 900 having to be replaced between 6 June and 14 August in Normandy. Can the U.S. Army currently replace such tank and crew losses? With greater vulnerability, how can it be avoided?...

Major General William R. Desobry's 1972 Main Battle Tank Task Force established 19 design factors in a specific priority, based on historical data. I have yet to see any evidence the findings should change. The Bundeswehr's Keiler Study in the late 1960s found tanks that could not survive direct armor piercing fire would on average kill one enemy tank for each friendly tank lost. Being able to survive a hit altered the exchange ratio to 4 to 1 in favor of the heavier armored tank....

Only twice have U.S. Army tank crews gone into combat with state-of-the-art vehicles: the FT17 (a foreign design) and the M1. Look at what was achieved, and how low our losses were both times. Heavy armor forces are a deterrent to aggressor nations. Thus the aggressors turn to other less costly means against us. There are at least two nations with the manpower and money to develop a significant armor heavy threat in the next 20 years....

Is it possible for a light armored vehicle to be as effective as the M1A2SEP? Yes, but the technology is not currently available nor does the will to spend the money necessary to develop the hardware exist. To continue on the current road, the U.S. Army and the nation must accept the risk of not just defeat of the light mechanized force, but total destruction.

CHRIS SCHNEIDER
U.S. Army (Armor), Retired

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Command List Corrections

The command list that ran with the Nov-Dec 2000 issue included several errors:

The commander of 38th ID's 37th Bde. is COL Matt Kambic.

The commander of 1-185 AR, 81st AR Bn. is MAJ (P) Keith D. Lochner and the CSM is R. Reynolds.

Some Road Wheels Defective; Most Failed from Wear, Neglect

An investigation into a series of road wheel failures at Fort Hood, Texas has determined that some failed due to material defects in the wheels, but the majority of failures were caused by normal wear or poor maintenance. The probe, by TEAM Abrams and personnel from the Red River Army Depot, blamed the majority of the failures on improper track tension and failure to keep mud from building up around the road wheels, which restricts their movement and causes uneven wear. Many of the failures occurred during the muddy rainy season at Fort Hood.

TACOM is publishing a Maintenance Advisory Message reemphasizing the need for proper track maintenance, and a booklet detailing track maintenance do's and don'ts will follow. Red River has also offered to provide special training on inspection procedures for tracked systems. At the Armor School, the subject is being reemphasized during preventive maintenance training.